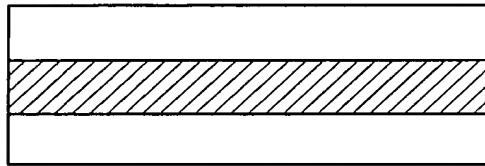


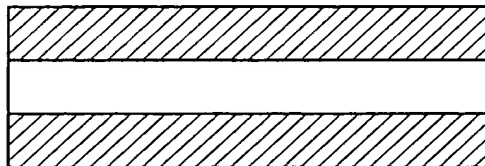
MAGNETOSTRICTIVE LAYER
PIEZOELECTRIC LAYER

FIG. 1a



PIEZOELECTRIC LAYER
MAGNETOSTRICTIVE LAYER
PIEZOELECTRIC LAYER

FIG. 1b



MAGNETOSTRICTIVE LAYER
PIEZOELECTRIC LAYER
MAGNETOSTRICTIVE LAYER

FIG. 1c

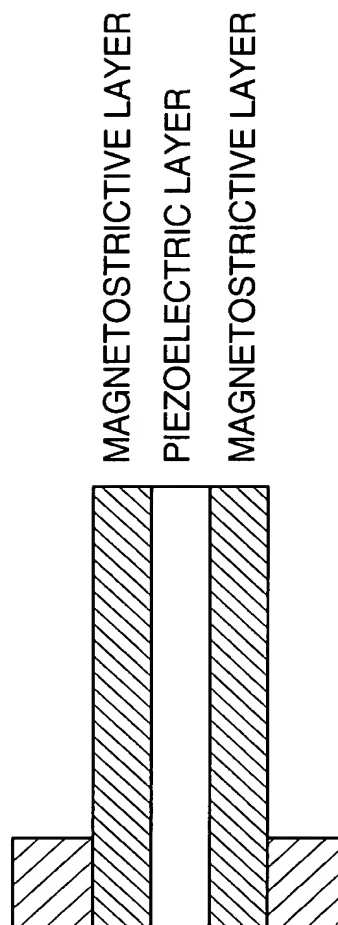
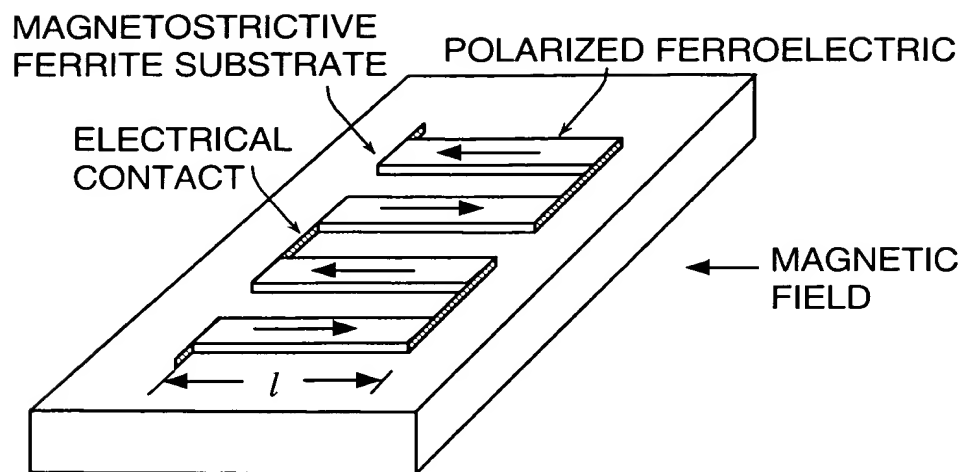


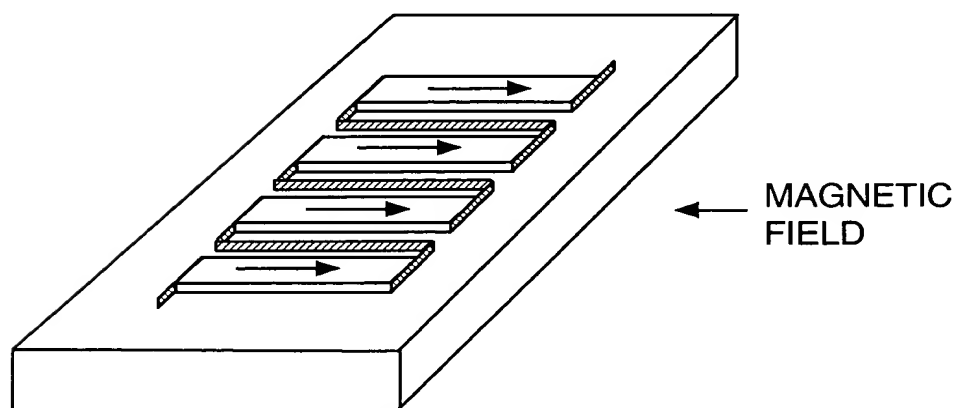
FIG. 2

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ANTIPARALLEL POLARIZATION

FIG. 3a



PARALLEL POLARIZATION

FIG. 3b

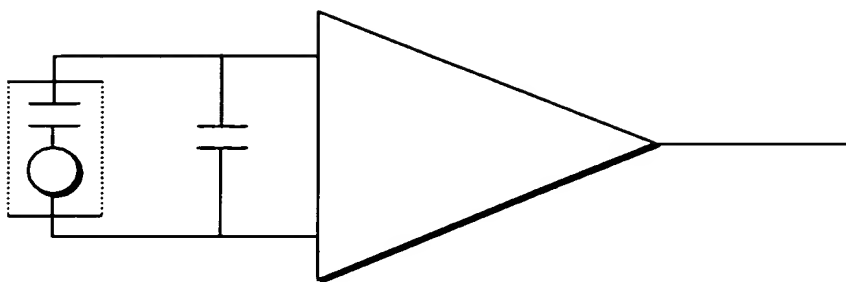


FIG. 4a

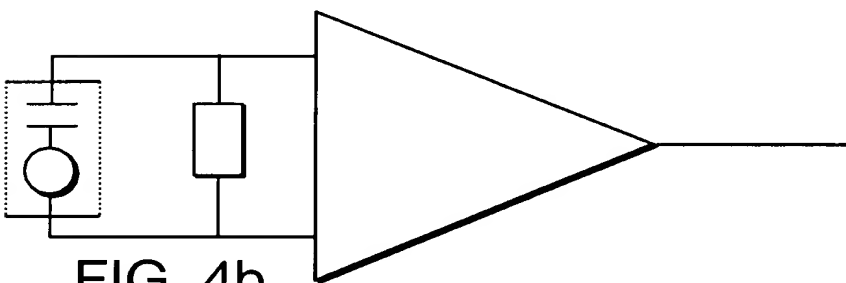


FIG. 4b

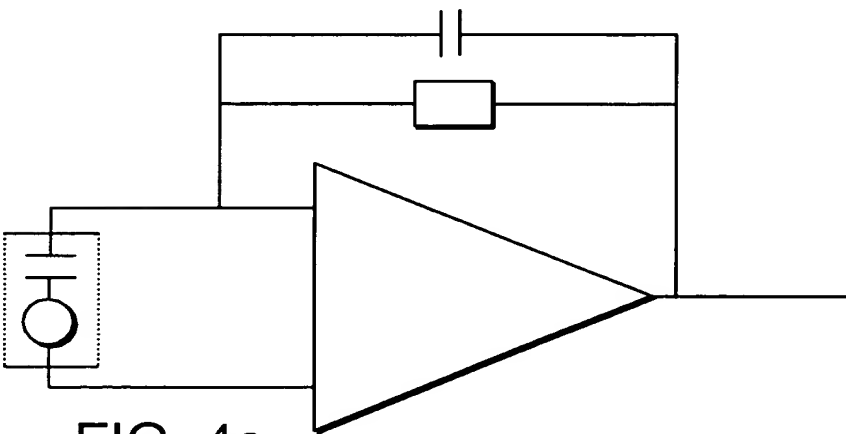


FIG. 4c

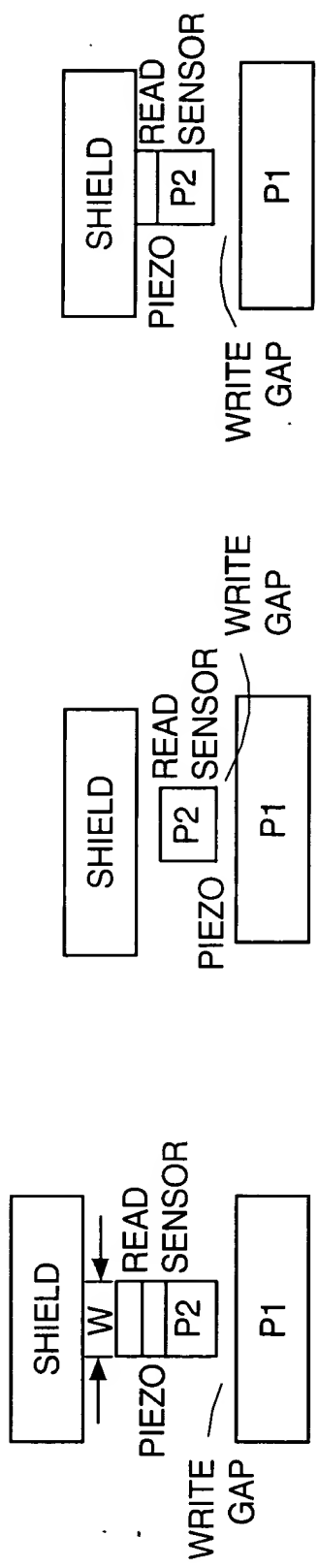


FIG. 5a

FIG. 5b

FIG. 5c

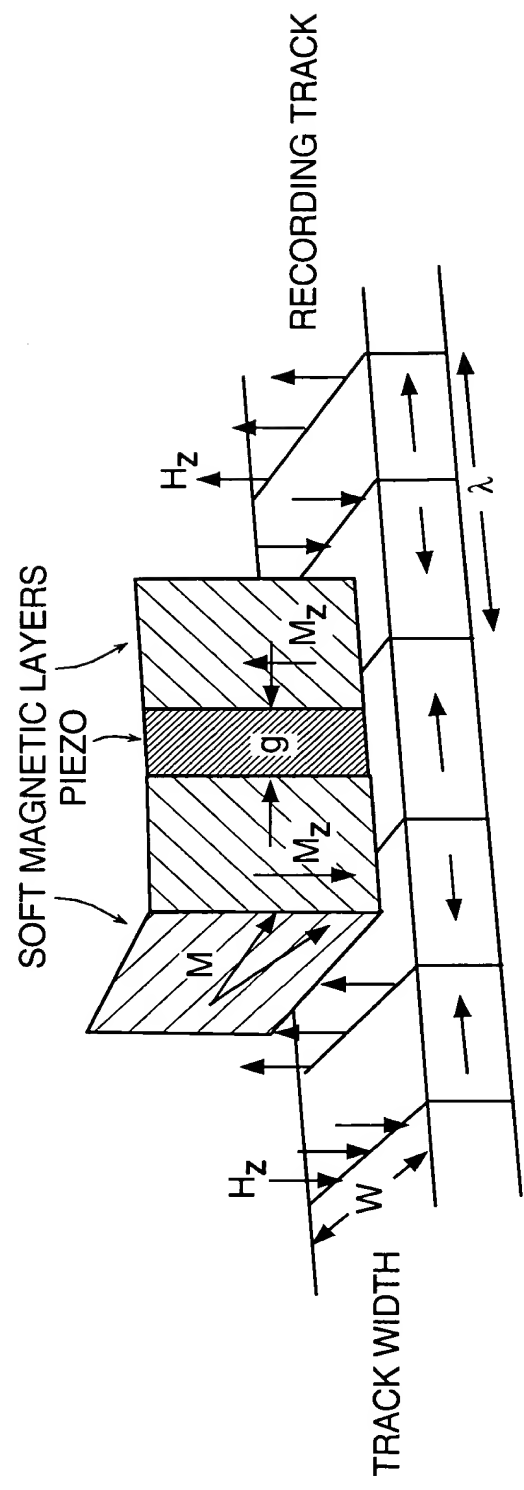


FIG. 5d

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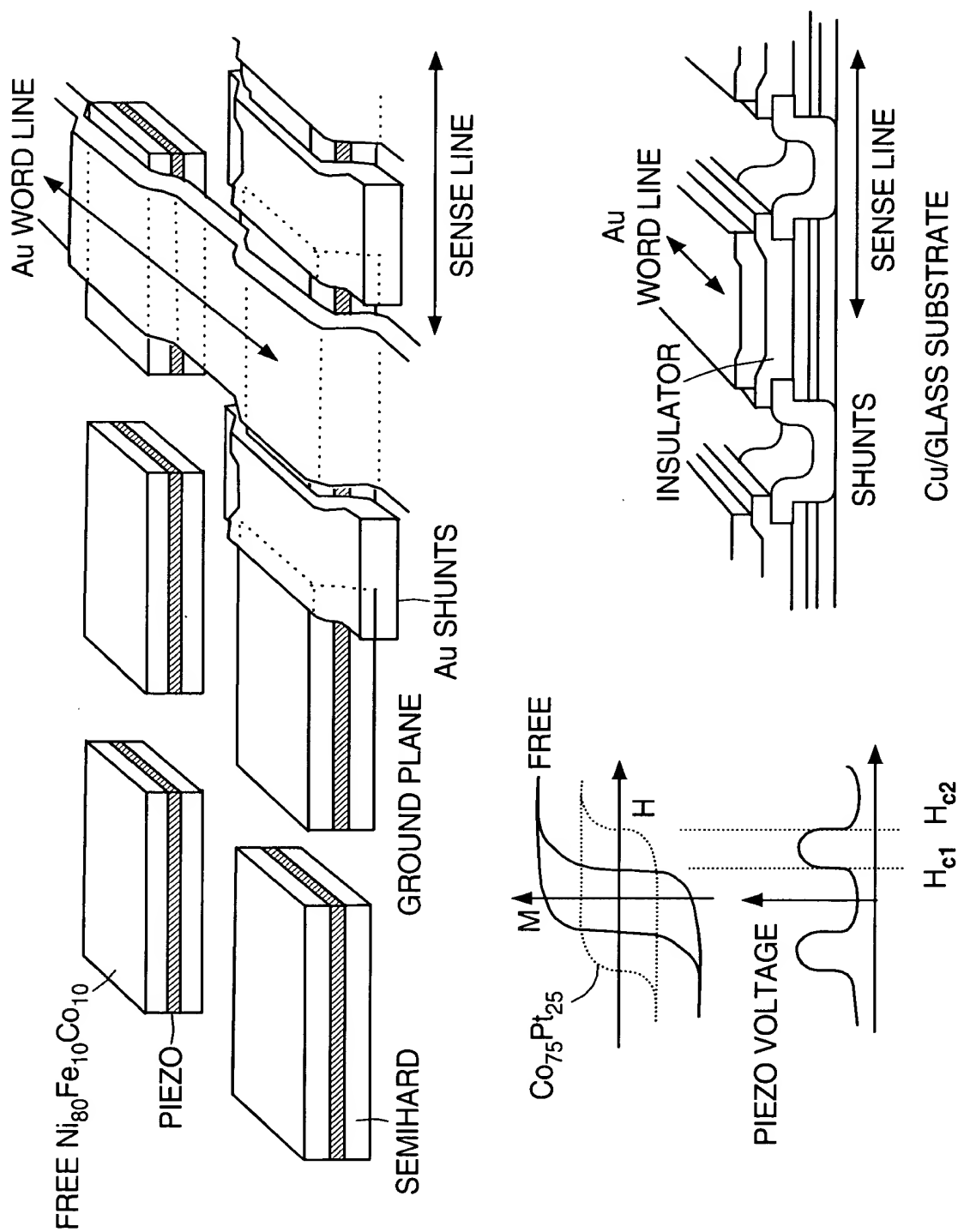


FIG. 6

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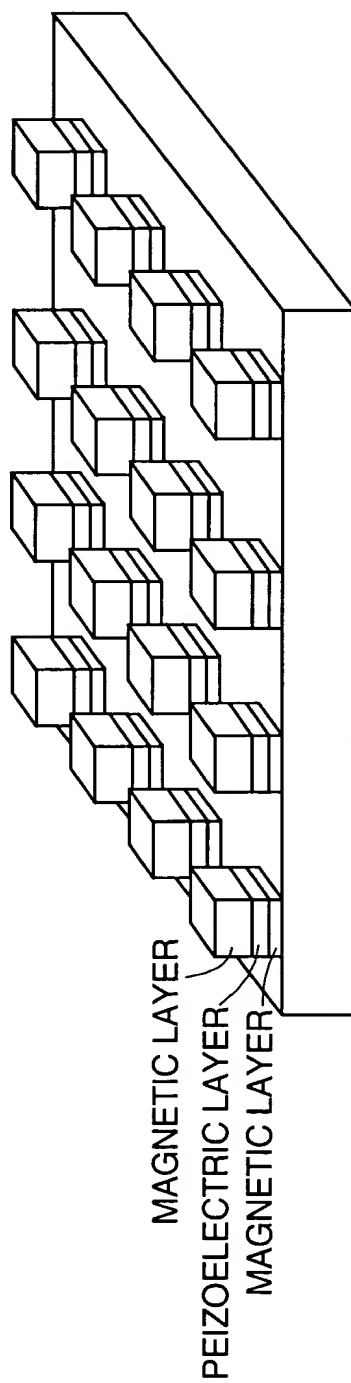


FIG. 7

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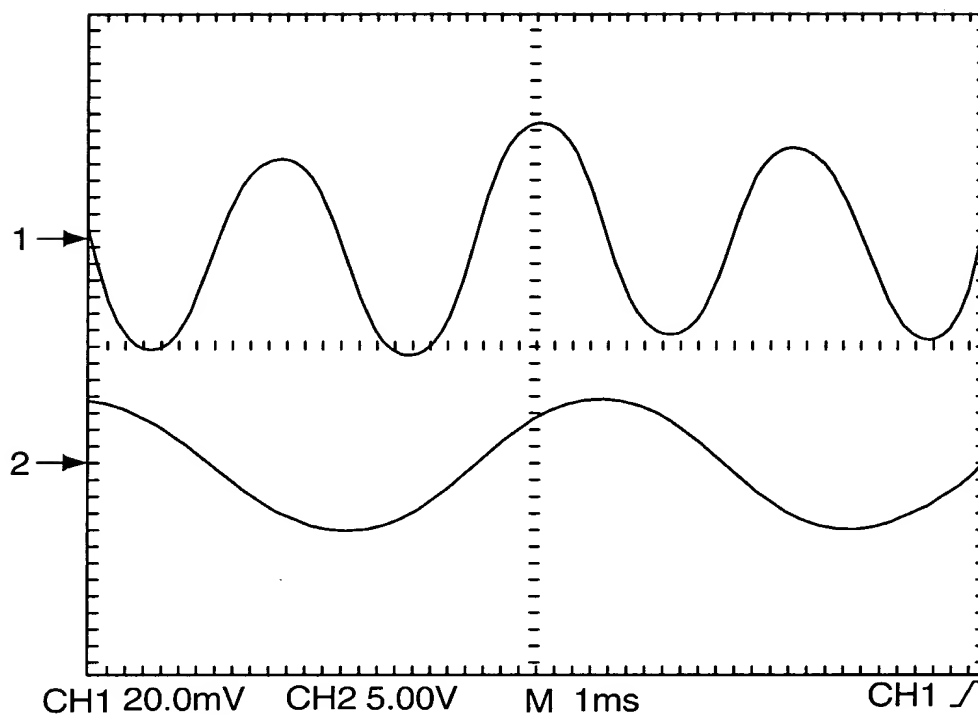


FIG. 8

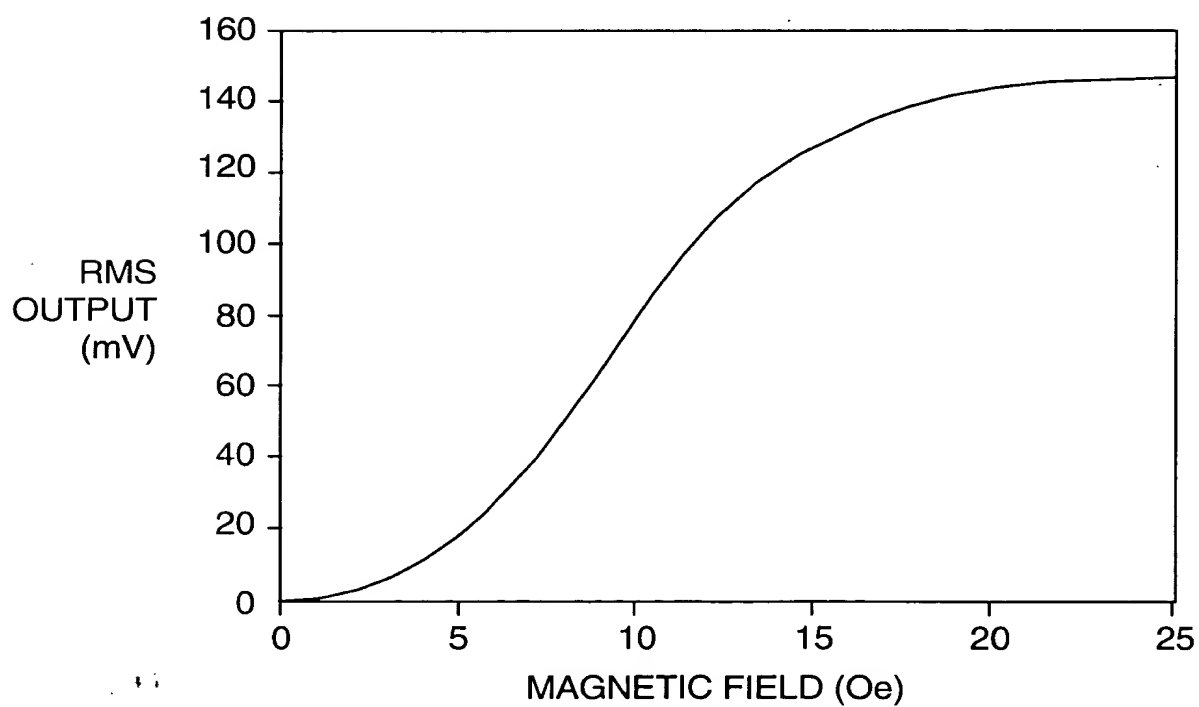


FIG. 9

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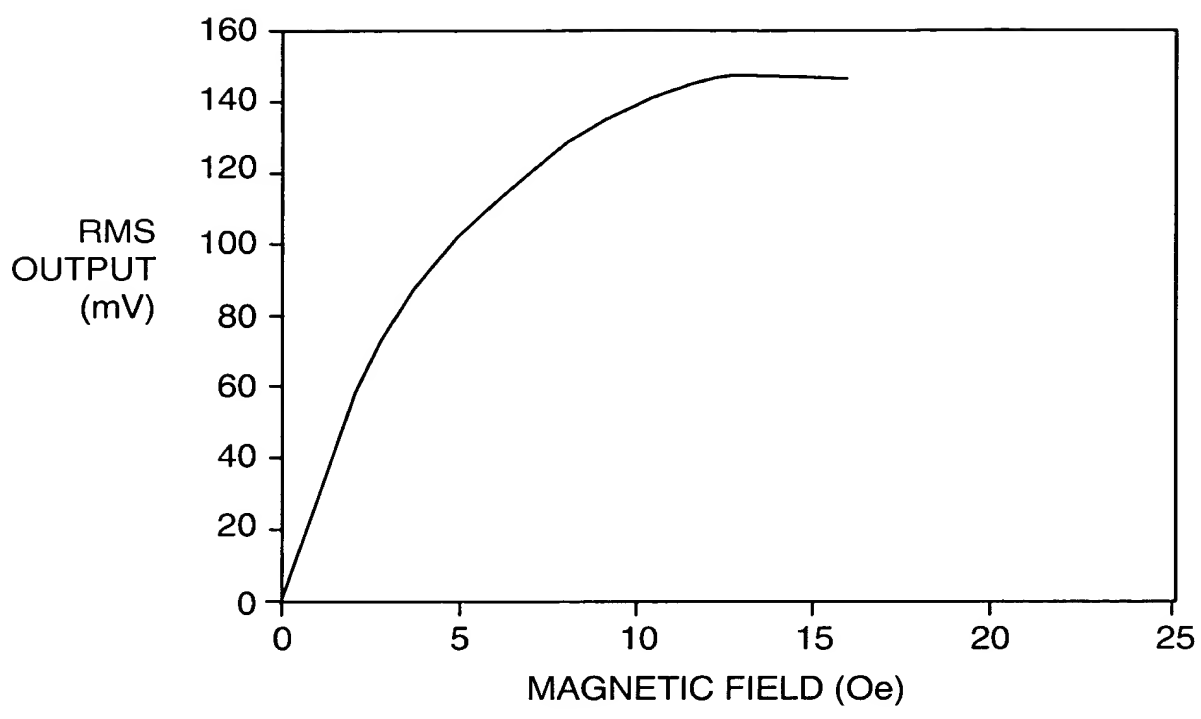


FIG. 10

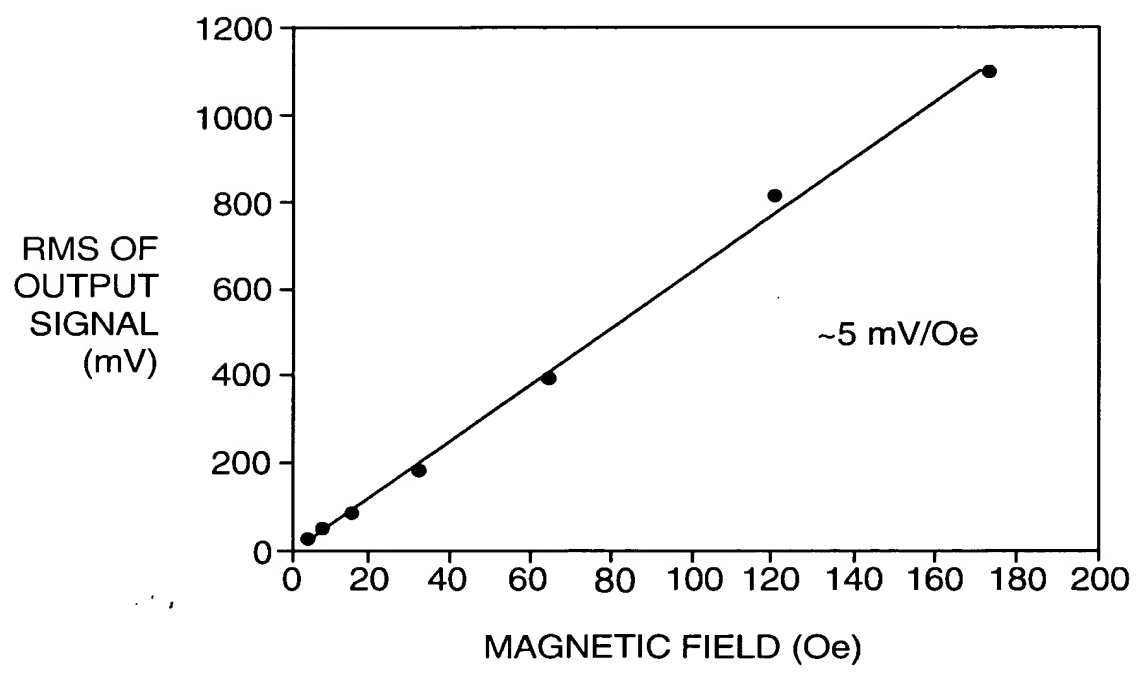


FIG. 11

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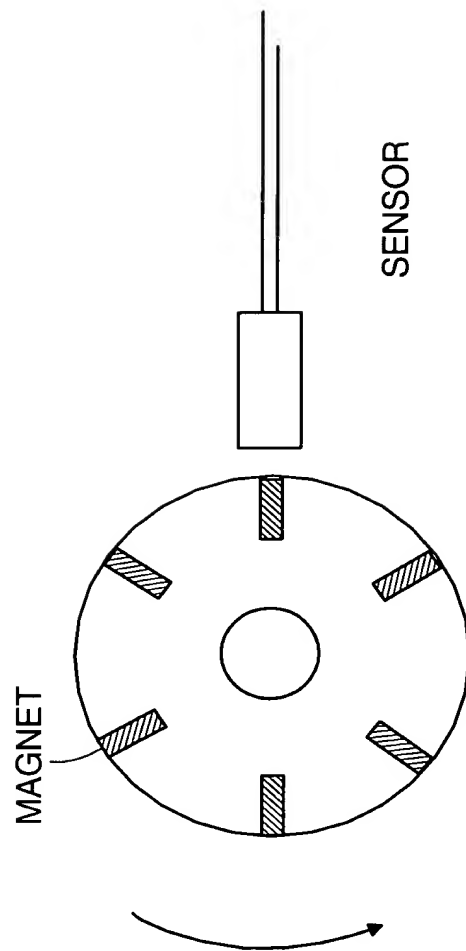
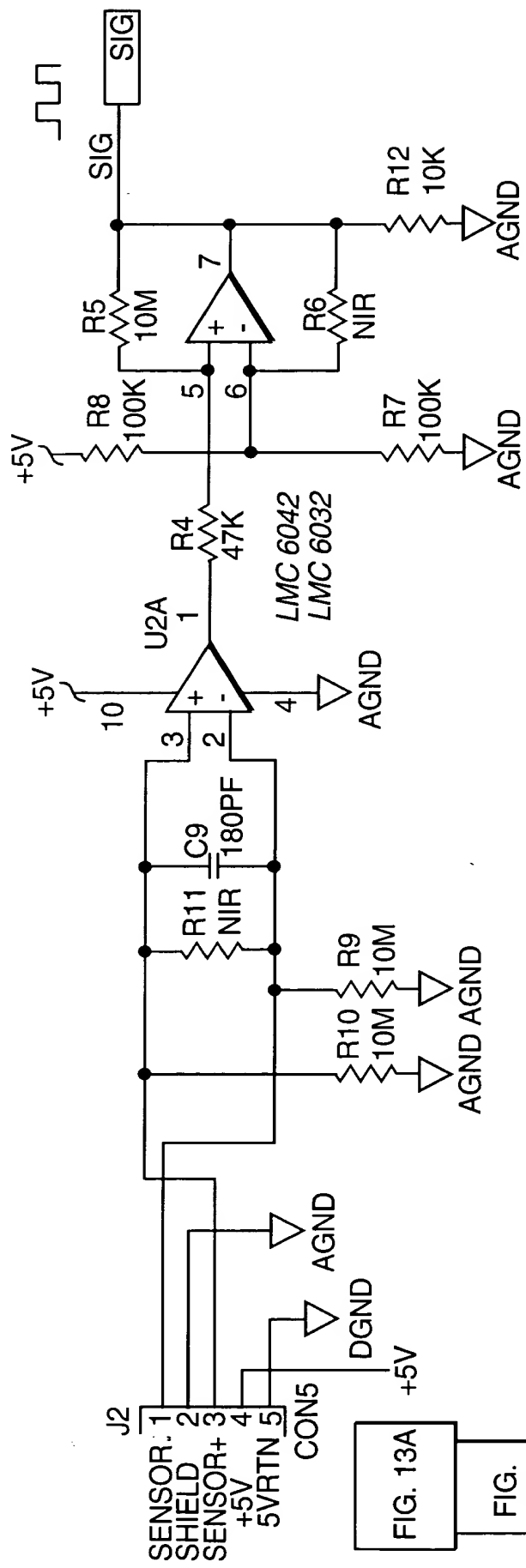


FIG. 12



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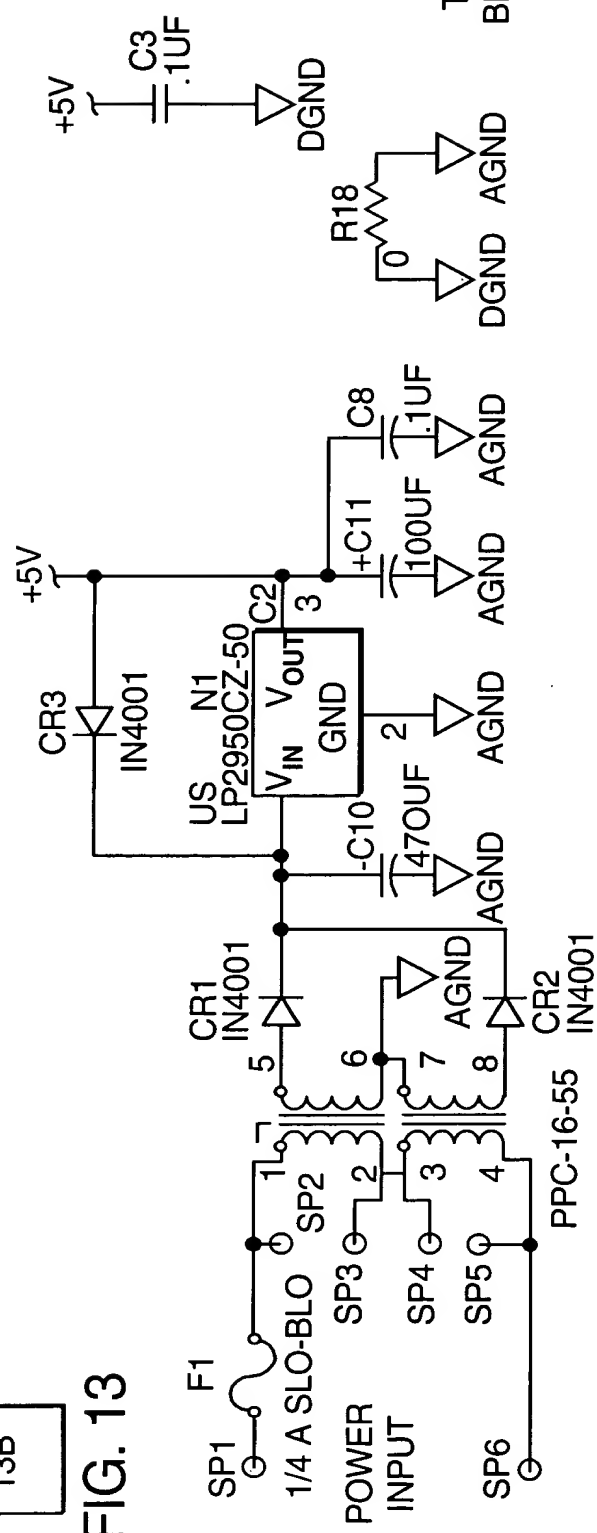


FIG. 13A

FIG. 13

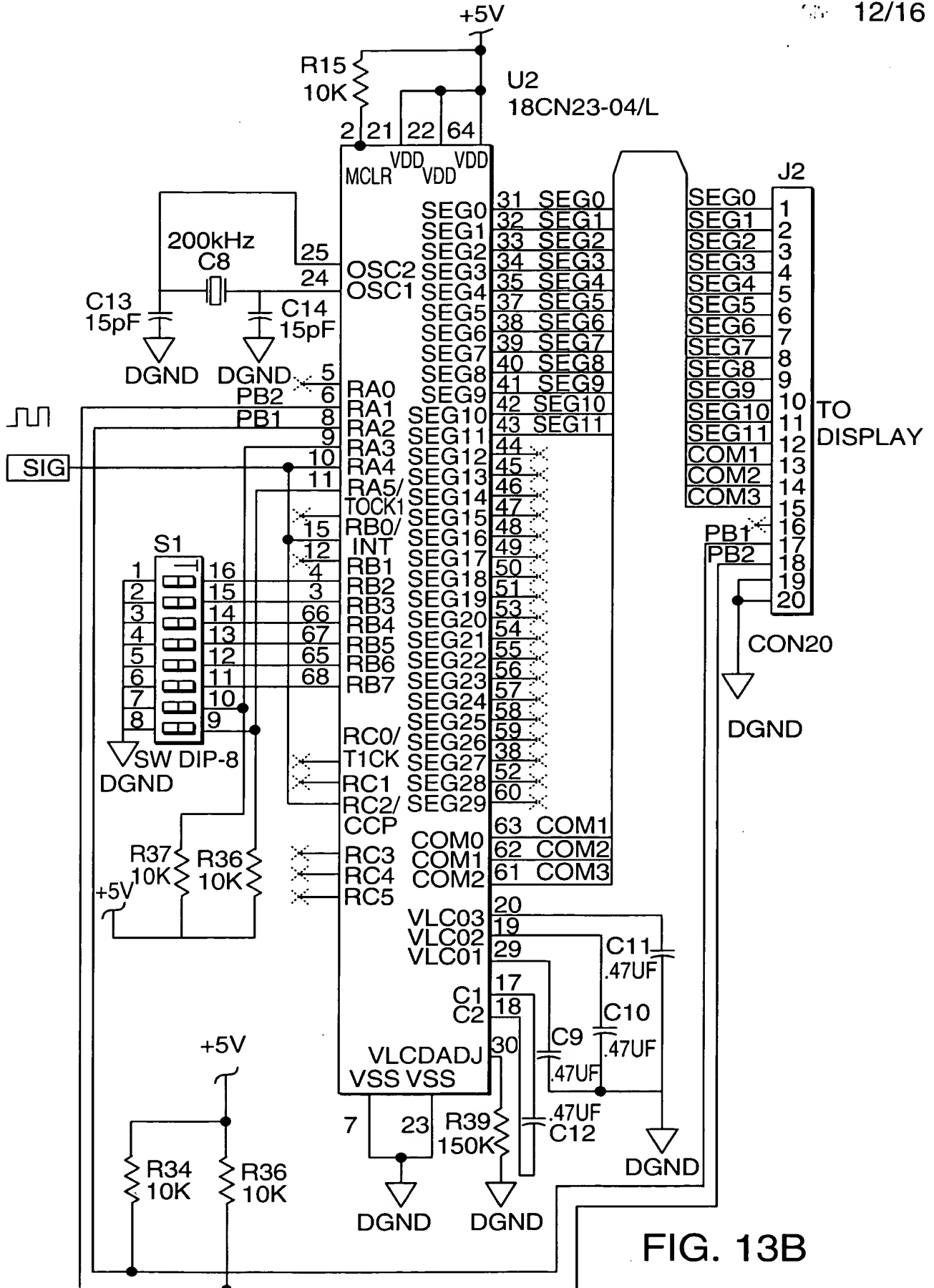


FIG. 13B

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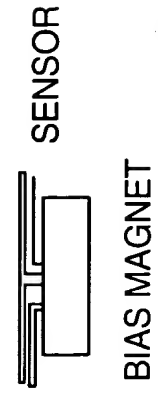
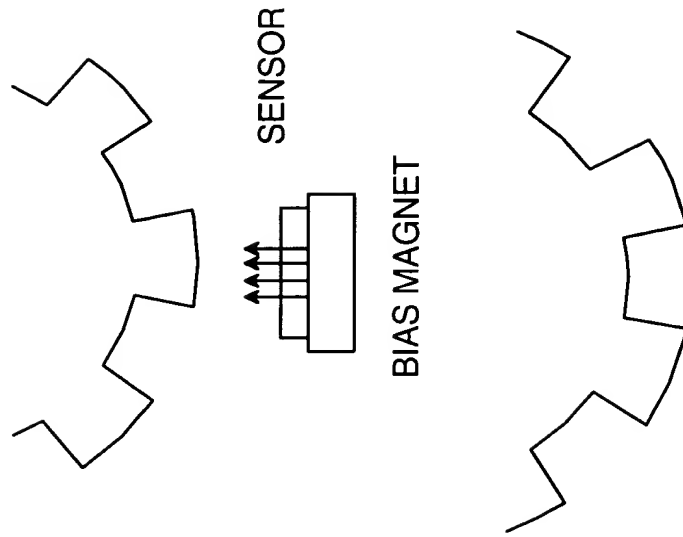


FIG. 15

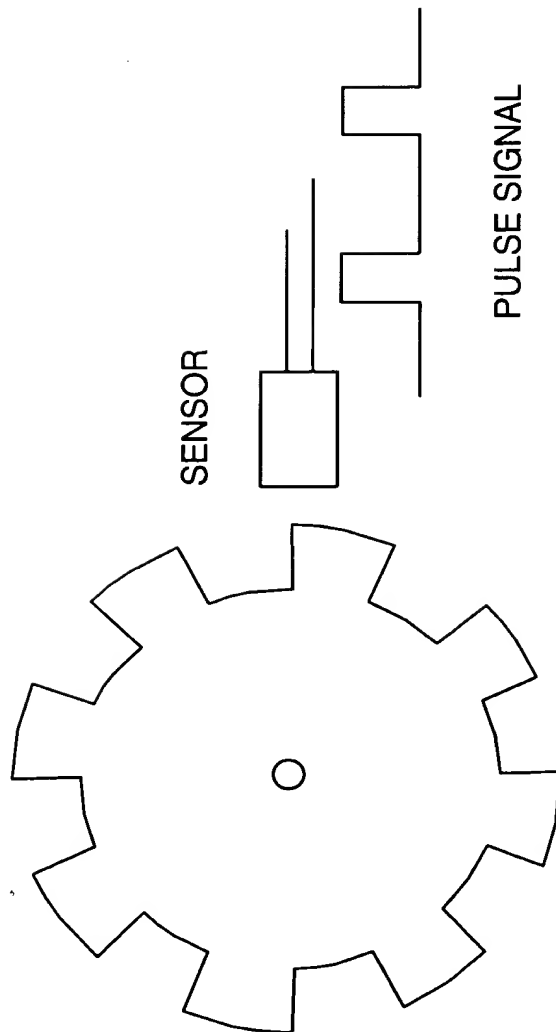


FIG. 14

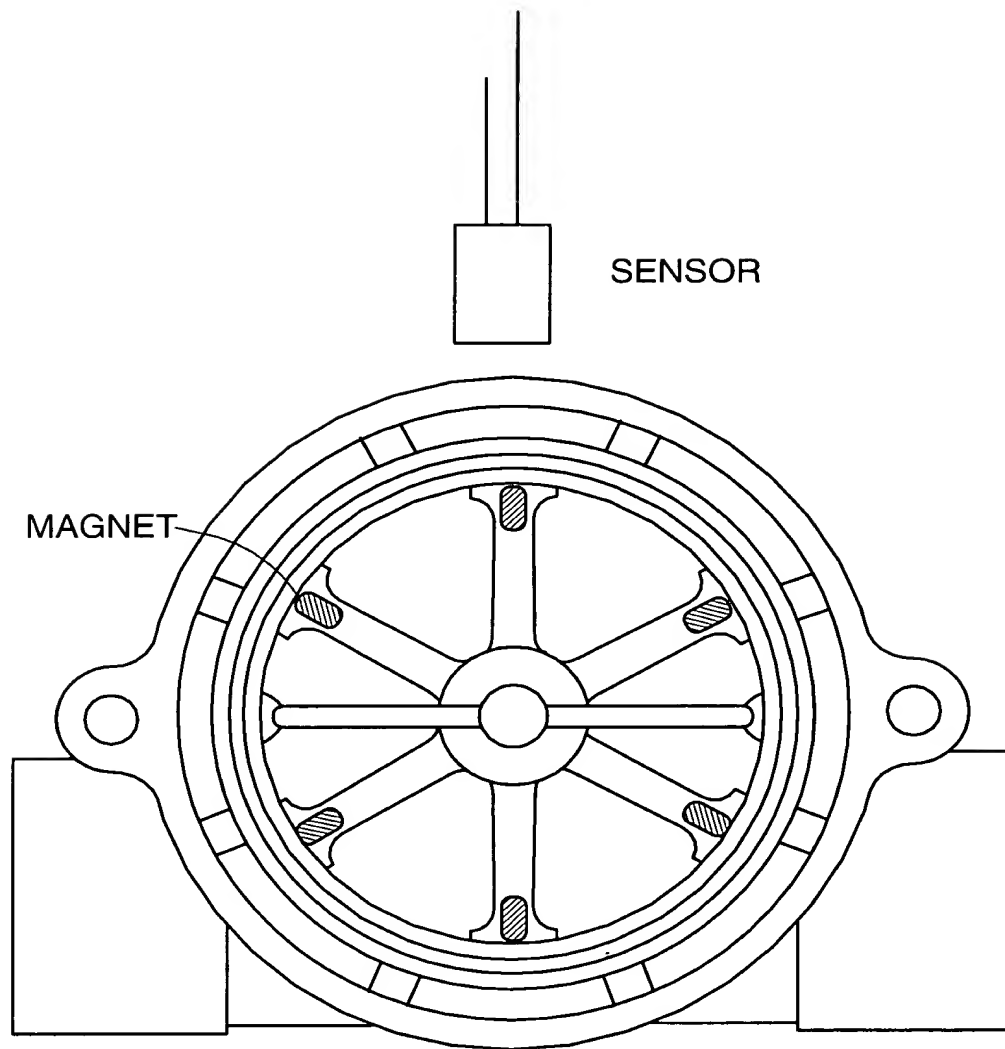


FIG. 16

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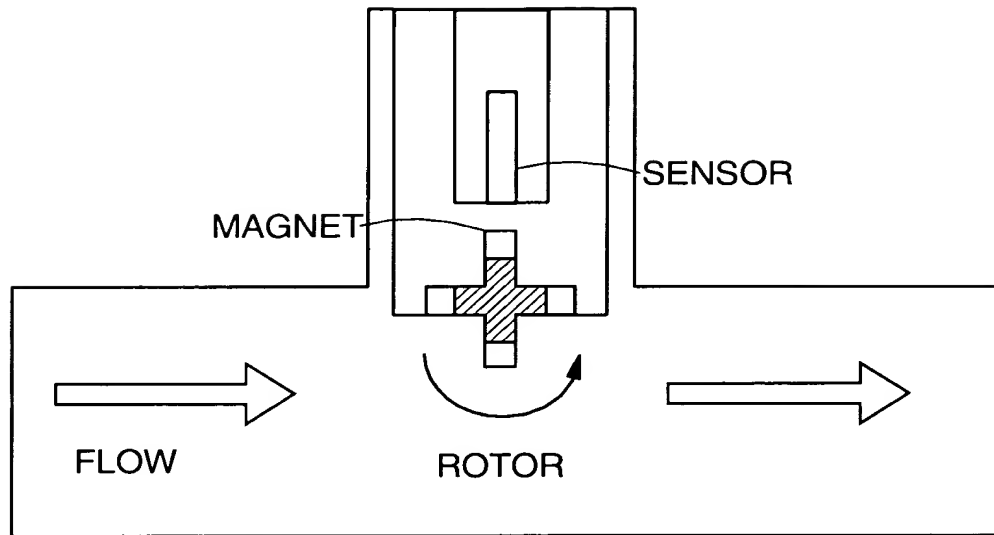


FIG. 17

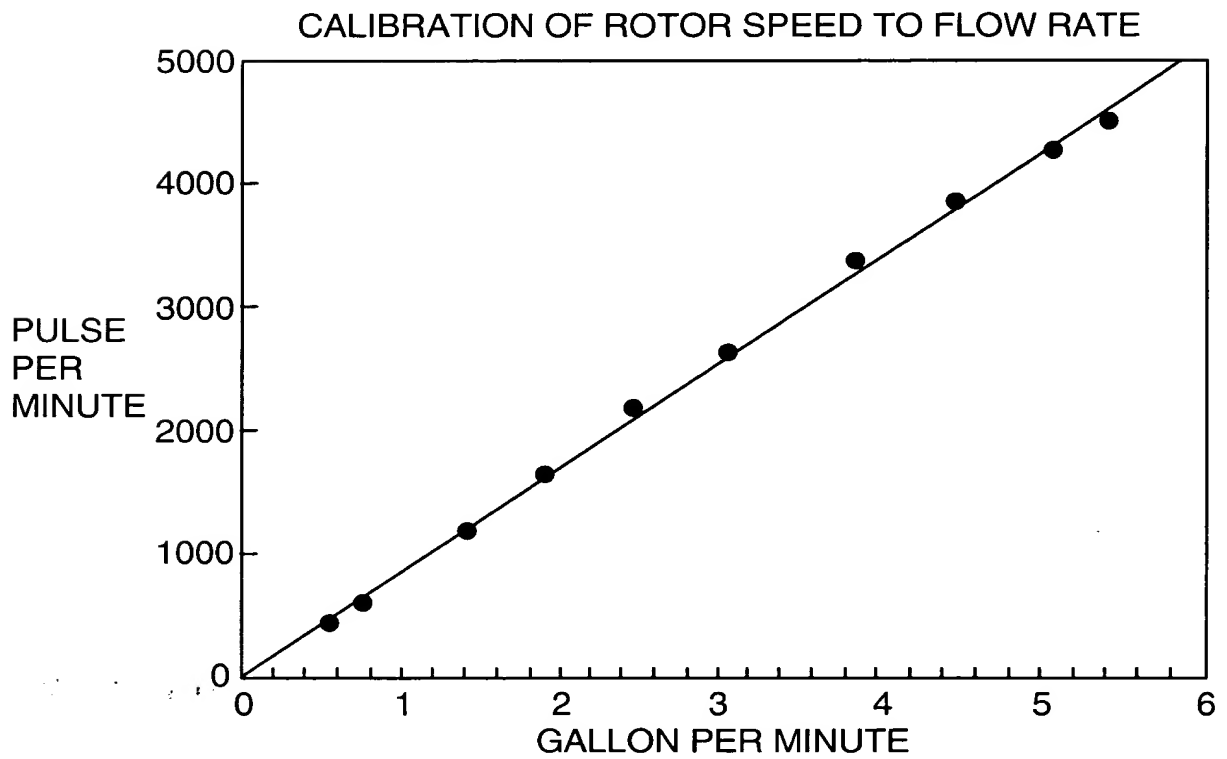


FIG. 18

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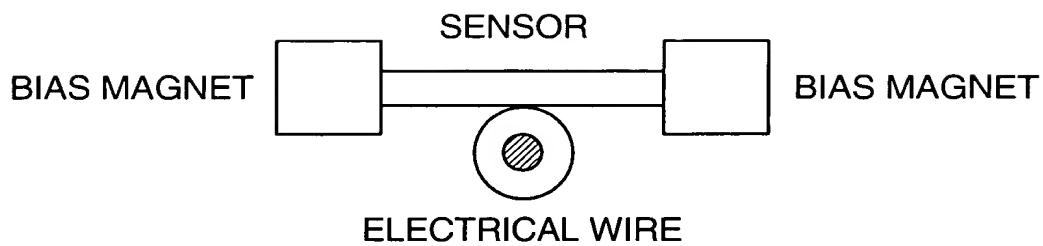


FIG. 19

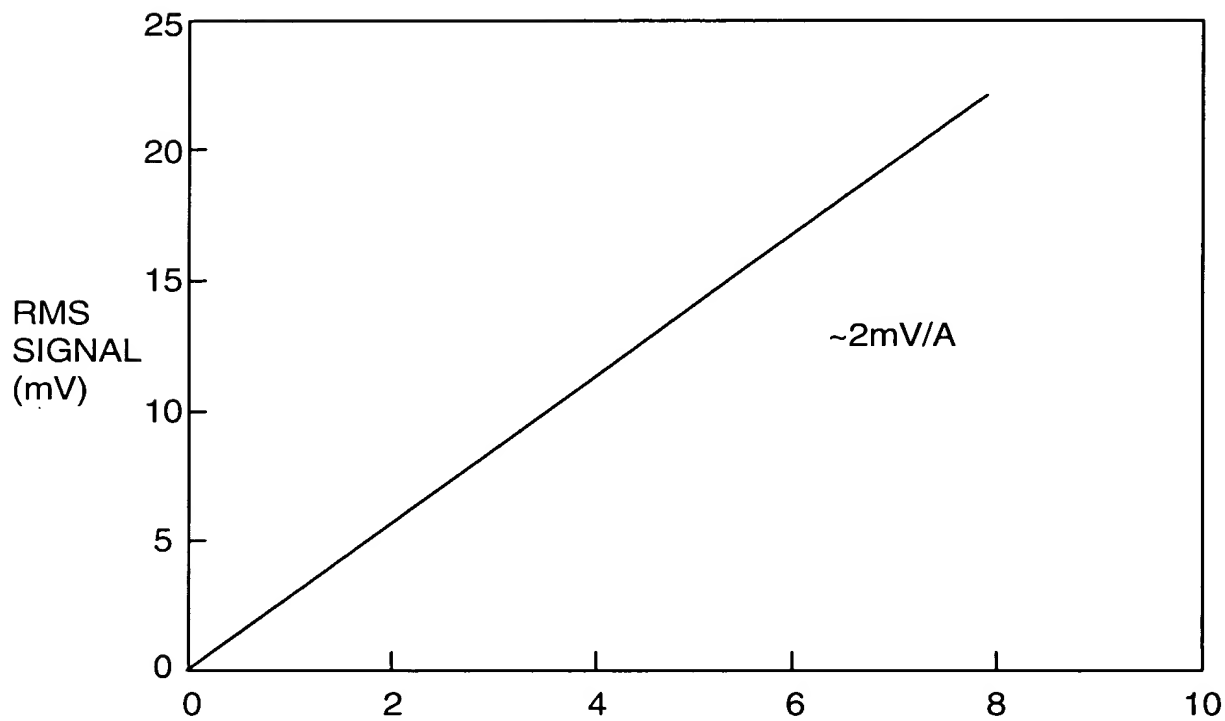


FIG. 20